

S/126/62/014/006/010/020  
E193/E383

Internal friction ....

the homogenizing treatment did ensure uniform distribution of the nitrogen throughout each specimen. The temperature-dependence of internal friction was determined for each material before and after nitriding, after the homogenizing treatment and after the homogenizing treatment followed by quenching from various temperatures. Conclusions: 1) when the nitrogen content of austenitic iron-base alloys exceeds a critical value of 0.2-0.3%, a peak appears on the temperature-dependence of the internal friction of the alloy, the peak being caused by diffusion of the nitrogen atoms to the elastic-stresses field in the face-centered cubic lattice. This effect is demonstrated in Fig. 1, where the internal friction of electrolytic iron, containing 0.5% N, is plotted against the test temperature, the various curves relating to specimens given the following treatment: I - homogenizing treatment and water-quenching from 700 °C; II - homogenizing treatment and water-quenching from 700 °C and half-hour tempering at 460 °C; III - as in II - followed by another water-quenching from 700 °C and a sub-zero treatment at liquid-nitrogen temperature. 2) With increasing nitrogen content, the height of the internal-friction peak increases

Card 2/5

Internal friction ....

S/126/62/014/006/010/020  
E193/E383

linearly and the peak is shifted towards lower temperatures.

3) The activation energy for the internal-friction peak increases from 33 kcal/mole for unalloyed austenite to 41 kcal/mole for for the Mn- and Cr-bearing austenite, the simultaneous addition of Mn and Cr causing also broadening of the peak. 4) Partial decomposition of austenite brings about the appearance of additional internal-friction peaks. There are 7 figures and 2 tables.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow  
Institute of Steel and Alloys)

SUBMITTED: May 21, 1962

Card 3/5

VERNER, V.D.; FINKEL'SHTEYN, B.N.; SHALIMOVA, A.V.

Use of the internal friction method for studying the nitrogen  
behavior in iron alloys with face-centered cubic lattices. Fiz.  
tver.tela 3 no.11:3363-3366 N '61. (MIRA 14:10)

1. Moskovskiy institut stali im. I.V.Stalina.  
(Iron alloys) (Crystal lattices)

VERNER, V.R.

Manufacture of the steering lever shaft end of the GAZ-51 automobile.  
Avt.prom. no.3:34 Mr '61. (MIRA 14:3)

1. Simferopol'skiy zavod avtomobil'nykh ruley.  
(Automobiles--Steering gear)

1. 04186-57 ENT(m)/I/ENP(t)/ETJ IJP(s) JD/JG/GD

ACC NR: AT6026903

SOURCE CODE: UR/0000/66/000/000/0018/0021

AUTHOR: Piguzov, Yu. V.; Verner, V. D.; Shulepov, V. I.; Rzhevskaya, I. Ya.

ORG: none

TITLE: A study of the behavior of interstitial atoms in molybdenum by means of internal friction

SOURCE: AN SSSR. Institut metallurgii. Vnutrenneye treniye v metallakh i splavakh (Internal friction in metals and alloys). Moscow, Izd-vo Nauka, 1966, 18-21

TOPIC TAGS: internal friction, molybdenum, carbon, nitrogen, oxygen, activation energy, temperature dependence, solid solution, quenching, tempering, plastic deformation

ABSTRACT: An internal friction study was made of the effects of  $C$ ,  $O_2$  and  $N_2$  additions in molybdenum. The temperature dependence of internal friction was measured in a vacuum on samples of 1 mm width and 0.35 mm thickness. Oscillation frequencies ranged from 0.5 to 2.1 cps. Quenched samples exhibited a wide internal friction peak, spread over the range 60-400°C, the height of which increased linearly as a function of quenching temperature due to the higher solubilities of the interstitial atoms. The concentration ratio  $C/C_{max}$  for C,  $N_2$  and  $O_2$  corresponded with the internal friction ratio  $Q^{-1}/Q_{max}^{-1}$ . The peak itself consisted of three components--I, II, III--a high central por-

Card 1/2

L 04186-67

ACC NR: AT6026903

tion (II) and two neighboring plateaus (I, III). The related activation energies as determined by the Wert-Marx method were 26, 32, and 39 Kcal/mol for I, II and III respectively. Component III was associated with carbon since it vanished after quenching from 1000°C, and the concentration of carbon in solid solution is negligible below 1200°C. The central component II may have been caused by oxygen since oxygen is the most soluble interstitial in molybdenum; also  $Q^{-1}/Q_{\max}^{-1}$  correlated best with  $O_2/O_2^{\max}$ .

Component I was probably caused by nitrogen. The activation energy for nitrogen diffusion in molybdenum was previously determined by Hartley and Wilson to be  $25.1 \pm 2.7$  Kcal/mol. The peaks and the low temperature background decreased in magnitude after tempering at 600°C for 30 min, or in quenched samples after annealing in hydrogen at 1600°C. Deformation of vacuum annealed samples pushed the high temperature side toward the left, either as a result of the breakaway of dislocations from Cottrell atmospheres or because of localized differences in deformation conditions. Orig. art. has: 6 figures.

SUB CODE: 11,20/

SUBM DATE: 02Apr66/

ORIG REF: 001/

OTH REF: 004

Card 2/2 LC

NIK'KAMANOVICH, K.A.; VERNER, V.S.

Separation into fractions of the solid residue of tar waters from  
the thermal processing of peat. Trudy Inst. toef. AN ESSR 9:260-  
266 '60. (MIRA 14:2)

(Peat gasification)

VERNER V.D.

SKRIGAN A.I. AND VERNER V.S. "The effect of thermic turpentine removal on the chemical removal on the chemical composition of tar-impregnated pine wood" Izvestiya akad. nauk BSSR, 1948, no 6, p.161-66, - Bibliog: 7 items

SO: U-3261, 10 April 53, (Letpis 'Zhurnal 'Nyk Statey No. 11, 1949)



23

CA

Utilization of forest plants (wild grass) for the pulping paper industry. V. B. Verger, *Sbornik Nauch. Rabot*

*Abad. Nauch Belorusskoi S. S. R. 1939, 128-34; Khim. Referat. Zhur. 1940, No. 4, 106.*—Forest grasses of the southern regions of White Russian S. S. R., rushes, sedges and reeds were examd. for moisture, ash, resin, cellulose and lignin. These plants are similar in compn. to rye, wheat and oat straw. The yield of pulp on cooking the plants in NaOH soln. for 6 hrs. at 165-75° and a pressure of 6-7 atm. is 27-40%. The smaller yield of cellulose from forest plants (as compared with straw) is, probably, due to the difference in the pulping methods. The content of α-cellulose in pulps of these plants was nearly identical in all cases (84.3-86.0%). The pulp of these plants was bleached with Cl<sub>2</sub> and the bleached products were tested for their elongation and tearing strength. Forest plants are equal to straw as raw material for the paper industry. W. R. Henn

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

✓ Milling of wood  
manufacture of charcoal  
✓ reclamation of swampy land  
m. of deeply buried fossil wood is obtained each year. This  
wood has a high content of lignin and is used for the  
production of charcoal and for the manufacture of  
hydrocarbons.

Veriver, U.S.

✓ The hydrolytic saccharification of polysaccharides of plant by-products and the development of technological procedures for the improvement of the nutritional aspect of crude fodder. A. I. Skrigan, A. I. Kozlov, and V. S. Veriver. *Izvest. Akad. Nauk Beloruss. S. S. R.* 1953, No. 6, 169-78; *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 13878. — (2)  
A study was made of the products of hydrolysis of the polysaccharides, mannin, galactan, xylan, araban, etc. in plant materials normally used as crude fodder (straw and chaff of grain cultures, woody shoots, the stems and husks of corn, etc.). The hydrolysis was brought about with the aid of 0.2% HCl treatment of the material for 3 hrs. The quantity of easily hydrolyzed polysaccharides ranged between 17.74% in the sunflower stems and 46.23% of corn husks and 41.85% in wheat chaff. Equally wide variations were observed generally for the content of sugar in the hydrolyzates. H. S. L.

MIL'KAMANOVICH, K.A.; VERNER, V.S.

Chromatographic method for separating the solid residue of tar  
water from the thermal decomposition of peat. Dokl. AN BSSR 4  
no.8:337-339 Ag '60. (MIRA 13:8)

1. Institut torfa AN BSSR. Predstavleno akad. AN BSSR B.V.  
Yerofeyevym.

(Chromatographic analysis) (Tar)

VERNER, V.S.; RAKOVSKIY, V.Ye.

Method for studying the chemical composition of peats of a low  
degree of decomposition. Dokl. Ak. BSSR 8 no.11:727-730 N 164.  
(MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut torfa Gosudarst-  
vennogo komiteta po toplivnoy promyshlennosti SSSR.

VARTANOV, Grayr Leonovich; VERNER, Vadim Vladimirovich; SEREBRYAKOV,  
Viktor Mikhaylovich; GUREVICH, B.M., nauchnyy red.; CHISLOV,  
M.M., red.; SKITEVA, R.A., red.; NESMYSLOVA, L.M., tekhn. red.

[A manual for electricians and repairmen]Elektromonter-remontnik.  
Moskva, Proftekhizdat, 1962. 222 p. (MIRA 16:1)

(Electric motors--Maintenance and repair)

(Electric transformers--Maintenance and repair)

(Electric machinery--Maintenance and repair)

VERNER, Vladimir Vladimirovich, inzh.; KHOVANSKIY, Leonid  
Dmitriyevich, inzh.; APAKIN, I.S., red.; FREGER, D.P.,  
red.izd-va; GVITS, V.L., tekhn. red.

[Mechanization of the production of wooden boxes] Mekhani-  
zatsiia proizvodstva dereviannoi iashchichnoy tary; iz opyta  
raboty perebovykh tarykh predpriatii Upravleniia lesnoi  
promyshlennosti i lesnogo khoziaistva Leningradskogo sov-  
narkhoza. Leningrad, 1962. 35 p. (MIRA 16:7)  
(Leningrad Economic Region--Container industry)

APAKIN, I.S., inzh.; VERNER, V.V.

Uniformization and standardization of boxes. Der. prom. 12 no.11,4-5  
N '63. (MIRA 17:1)

1. Byvsheye Spetsial'noye proyektno-konstruktorakoye byuro Upravleniya  
mebel'noy i derevobrabatyvayushchey promyshlennosti Soveta narodnogo  
khozyaystva Leningradskogo ekonomicheskogo rayona.



GLAGOLEVA, T.A., kand.tekhn.nauk; VERNER, V.V., inzh.; SOKOLOV, V.I.;  
VTOROV, K.I.; BOROVY, A.I.; STROKOV, I.G.; DADIOMOV, M.S.,  
inzh.; PETROVA, V.V., red.isd-va; BOROVNIK, N.K., tekhn.rud.

[Norms (SN 81-60) for the electric lighting of construction  
and assembling operations] Normy elektricheskogo osveshchenia  
stroitel'nykh i montazhnykh rabot SN 81-60. Moskva, Gos.isd-vo  
lit-ry po stroit., arkhitekt. i stroit.materialam, 1960. 18 p.

(MIRA 13:7)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam  
stroitel'stva. 2. Moskovskiy institut okhrany truda Vsesoyuznogo  
tsentral'nogo soveta profsoyuzov (for Glagoleva). 3. Spetsial'noye  
konstruktorsko-naladochnoye byuro Glavmosstroya (for Verner, Soko-  
lov, Vtorov, Borovoy, Strokov). 4. Leningradskiy filial instituta  
Orgenergostroy Ministerstva stroitel'stva elektrostantsiy SSSR  
(for Dadiomov).

(Electric lighting)

ASHKENAZI, G.I., inzh.; VERNER, V.V., inzh.

Session of the lighting-engineering section of the Moscow Branch  
of the Scientific and Technical Society of the Power Industry.  
Svetotekhnika 5 no.5:28 My '59. (MIRA 12:7)  
(Lighting)

VERNER, V.V.

Tool for the manufacture of planer saws. Der.prom. 4 no.10:23-24  
0 '55. (MLRA 9:1)

1.Glavnyy inzhener Leningradskogo mebel'nogo kombinata.  
(Leningrad--Saws)

VARTANOV, Grayr Iecnovich; VERNER, Vadim Vladimirovich; SEREBRYAKOV,  
Viktor Mikhaylovich; SOROKINA, M.I., red.

[Electromechanical technician and repairman] Elektromonter-  
remontnik. Moskva, Vysshaya shkola, 1965. 206 p.  
(MIRA 18:8)

AUTHORS: Verner, Ye.E. and Zinovich, N.S. SOV/129-59-3-14/16

TITLE: Properties of Bearing Materials at 20 - 125 °C  
(Svoystva podshipnikovyykh materialov pri 20 - 125°)

PERIODICAL: Metallovedeniye i Termicheskaya Obrabotka Metallov,  
1959, Nr 3, pp 56 - 59 (USSR)

ABSTRACT: In IC engines, the operating temperatures of bearings frequently reach 100 °C. Usually given characteristics of the mechanical properties of bearing materials refer to temperatures not exceeding 25 °C. In this paper, the results are described of mechanical tests of bearing alloys in the temperature range 20 - 125 °C. The chemical compositions (in %) of the four investigated alloys were as follows:

	Sn	Sb	Cu	Te	Ni	Cd	As	Pb
B89 base	7.8	3.8	-	-	-	-	-	0.10
B83	82.58	11.11	6.13	-	-	-	-	0.15
BN	9.56	14.26	1.84	-	1.25	1.73	0.65	base
BT	9.97	14.32	0.78	0.08	-	-	-	"

Card 1/3 Of these, two are tin-base alloys and two lead-base alloys, mainly with antimony and copper additions.

SOV/129-59-3-14/16

Properties of Bearing Materials at 20 - 125 °C

The measured hardness values are entered in Table 2, the results of compression tests at temperatures up to 120 °C are entered in Table 3 and the ratios of the hardness to the yield point in compression are entered in Table 4. The measured data are also plotted in graphs, Figures 1-5. On the basis of the obtained results, the following conclusions are arrived at.

1) In tin alloys of the type B83, an increase in the temperature does not bring about a decrease in the plastic properties, characterised by the flattening of the specimen as a result of compression. In lead alloys, the magnitude of the flattening decreases appreciably with increasing temperature.

2) For alloys which contain SnSb crystals as the hard structural component, the ratio of the hardness to the compression strength was not a constant value; with increasing test temperature, this ratio also increases without any specific interrelation (it differs for each of the alloys).

Card2/3

3) The cracking up of the babbitt BN and the flattening of the babbitt BT observed in the operation of bearings

Properties of Bearing Materials at 20 - 125 °C <sup>SOV/129-59-3-14/16</sup>

in the case of excessive tightening is explained not only by the difference in the fatigue strength but also by the fact that at elevated temperatures, the babbitt BN breaks up almost without any plastic deformation (with a low magnitude of flattening of the specimen), whilst the babbitt BT has a relatively low strength. There are 5 figures, 4 tables and 1 Soviet reference.

Card 3/3

VERNER, Ye.E., inzh.; UMANSKIY, A.M., inzh.; GUREVICH, B.D., inzh.

Use of powder metallurgy products in the manufacture of tractors.  
Trakt. i sel'khoz mash. 32 no.10:42-44 0 '62. (MIRA 15:9)

1. Vladimirskiy traktornyy zavod (for Verner). 2. Moskovskiy  
eksperimental'nyy zavod (for Umanskiy, Gurevich).  
(Tractors) (Powder metallurgy)



PHASE I BOOK EXPLOITATION

509

Nauchno-tehnicheskoye obshchestvo mashinostroitel'noy promyshlennosti

Fasonnoye lit'ye mednykh splavov: [sbornik] (Shaped Casting of Copper Alloys; Collection of Articles) Moscow, Mashgiz, 1957. 205 p 6,500 copies printed.

Ed.: Orlov, N. D., Candidate of Technical Sciences; Eds.: Ignatenko, Yu. F., Engineer; Telis, M. Ya., Engineer; and Chursin, V. M., Candidate of Technical Sciences; Ed. of Publishing House: Chernysheva, N. P.; Tech. Ed.: El'kind, V. D.

PURPOSE: This collection of articles is intended for engineers, technicians, and workers engaged in casting nonferrous metals. It may also be used by students, graduate students and scientific workers in this field.

COVERAGE: This book contains papers presented during a technical and scientific convention held in Moscow in December 1955, on the theory and practice of shaped copper-alloy castings. This convention took place under the auspices of the kmitet tsvetnoy lit'ya Tsentral'nogo pravleniya NTO Mashprom (Committee on Nonferrous Castings of the Central Administration of the Scientific and Technological Division of the Machine

Card 1/17  
6

Shaped Casting of Copper (Cont.)

509

Industry), The book contains 20 articles dealing with theoretical and practical aspects of casting of nonferrous metals. See Table of Contents for abstracts of individual articles.

TABLE OF  
CONTENTS:

Foreword	3
Spasskiy, A. G., Doctor of Technical Sciences; Professor. Special Features of Lead-bronze Casting	5

The author reviews the history and the various properties of lead bronze. He relates the results of his investigations into the effects of various factors present during solidification, on the grain size and structure of this alloy. He also mentions the cause of gaseous inclusions. Various means of refining this alloy by fluxes and deoxidizers are mentioned. Blowing with inert gases is said to be still in an experimental stage. No personalities are mentioned. There are no references.

Card 2/17

Shaped Casting of Copper (Cont.)

509

Mal'tsev, M. V., Doctor of Technical Sciences, Docm't. Means of Improving Quality of Nonferrous Castings

12

This paper reports that experiments conducted during the last few years by the department of metallurgy at the Moskovskiy institut tsvetnykh metallov i zolota (Moscow Institute for Nonferrous Metals and Gold) showed that the quality of nonferrous castings may be considerably improved by adding small amounts of certain elements which change the process of crystallization and solidification of metals. These elements are said to effect the grain size and the distribution of alloying elements. Experiments were carried out with aluminum alloys to which small amounts (0.1 to 0.01 per cent) of titanium, zirconium, columbium, chromium, molybdenum, tungsten and boron had been added. The author concludes that this method of controlling the mechanical and other properties of castings by adding certain elements may have extensive practical applications. No personalities are mentioned. There are no references.

Chursin, V. M., Candidate of Technical Sciences. Effect on Structure and Properties of Lead Bronzes of Addition of Small Amounts of Certain Elements Card 3/14

31

## Shaped Casting of Copper (Cont.)

509

The author states that the control of the crystallization process and the grain size of metals depends on rate of crystallization, temperature of metal during casting, and modifying elements. Experiments were conducted with lead bronze to which iron, nickel, chromium, cobalt, titanium, zirconium, boron and columbium had been added. These elements were added to the melt prior to pouring. Care was taken to avoid aluminum and silicon contamination as even 0.005% of aluminum adversely affects the mechanical properties and particularly the impermeability of lead bronze. There are numerous graphs illustrating the effects of certain elements on the properties of the alloy, and some photomicrographs showing changes in grain size. The author concludes that the addition of boron improves the impermeability of the alloy, and that zirconium, titanium and, to a lesser degree, boron, improve corrosion resistance to sulfuric acid. He asserts that the changes in structure, not the reduction in grain size itself, are more important in determining alloy properties. No personalities are mentioned. There are 5 references, of which 3 are Soviet and 2 English.

Lakisov, P. A., Candidate of Technical Sciences. Quality Improvement of Lead-bronze Castings

44

Card 4/17

Shaped Casting of Copper (Cont.)

509

In this paper the author deals with gaseous porosity of lead bronzes. It is claimed that gaseous porosity, a common defect, may be controlled by some changes in the casting regime. The properties of charcoal and crushed fire-clay graphite crucible material as a protective cover for the melt are discussed. The author sees many advantages in crushed crucible material, among which is the fact that its moisture content is only 5 percent that of charcoal. A different approach to the problem is blowing with nitrogen, during which the hydrogen atoms enter nitrogen bubbles by diffusion. In conclusion the author states that the proper temperature of the melt during casting is an important factor in controlling porosity. The optimum casting conditions are shown in graphs and diagrams. No personalities are mentioned. There are no references.

Verner, Ye. E., Engineer. Effect of Addition of Certain Elements on Liquidation of Lead in High-Lead Bronzes 52

The author discusses the difficulty caused by liquation in making lead bronzes. He claims that analysis of the best American-made bearings showed a lead content

Card 5/17

Shaped Casting of Copper (Cont.)

509

of 40 to 45 percent. According to the author lead bronzes with 30-40 percent lead show a tendency to gravitational separation of metals. Certain elements are known to counteract this tendency. Experiments were carried out with 40 percent lead bronze to investigate the effects of some elements and are said to have shown that nickel, sulfur, lithium, antimony and other elements reduce the liquation tendencies of lead, antimony especially under conditions of slow cooling. Additions of manganese, columbium, tungsten, and tellurium as well as small quantities of potassium and sodium added in pure state or with sulfur do not improve the distribution of lead in the alloy. No personalities are mentioned. There are 6 references, of which 3 are Soviet, 2 English, and 2 German.

Ozerova, Ye. I., Engineer. Protective Fluxes in Melting of Brass

64

The author discusses the use of fluxes to prevent the loss of zinc through oxidation and evaporation in melting of alloys. To avoid such losses it is necessary to find a flux which will prevent oxidation and evaporation of zinc. One of the numerous physical properties of the flux must be sufficient viscosity to keep zinc-vapor bubbles from escaping, because hydrostatic pressure of the flux alone would be insufficient to prevent evaporation. The author gives the composition of a number of fluxes which satisfy the requirements. The raw materials

Card 6/24

VERNER, Ya.V., inzh.; VAL, G.A., inzh.; BELYKH, P.G., inzh.

Automated power truck. Stroil. 1 dor. mash. 6 no.2:26-30 F '61.  
(MIRA 14:5)  
(Conveying machinery)

YAKOBSON, A.N., inzh.; TITOV, P.P., inzh.; VERNER, Ye.V., inzh.; KEL'MAN,  
M.M., inzh.

Automatic unit for molding ornamental ceramic tiles. Stroi.i dor;  
mashinostr. 5 no.3:25-28 Mr '60. (MIRA 13 6)  
(Tiles)



VERNESCU. A.

Current concepts in the field of exploitation of crude-oil deposits by means of secondary-recovery methods. p. 547.

PETROL SI GAZE. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania si Ministerul Industriei Petrolului si Chimiei) Bucuresti, Romania. Vol. 9, no. 12, Dec. 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 6, June 1959

Uncl.

VERNESCU, A., ing. candidat in stiinte tehnice

Problems and prospects of the secondary exploitation of crude  
oil in Rumania. Petrol si gaze 12 no.8:367-371 Ag '62.

VERNESCU, A., ing., candidat in stiinte tehnice

Problema and prospects of the secondary exploitation of crude  
oil in Rumania. Petrol si gaze 12 no.8:367-371 Ag '61.

VERNESCU, A.

A method of foreseeing the behavior of crude oil deposits under partial water drive after the pressure has declined below the saturation pressure. p.246.

PERTOL SI GAZE. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romina si Ministerul Industrii Pertolului si Chimiei) Bucuresti, Romania.  
Vol. 10, no. 6, June 1959

Monthly List of East European Accessions (EEAI) LC Vol. 9, no. 2, Jan 1960

Uncl.

VERNESCU, Al.; RUSU, D.; LANGA, F.; DUMITRU, I.

Secondary recovery of crude oil from the Ochiuri Drader  
sand by gas injection. Petrol si gaze 15 no. 6:277-280  
Je '64.

VERNESCU, Al., ing., cand. in stiinta tehnice

Some problems and prospects of the secondary recovery of petroleum  
in Rumania. Petrol si gaze 12 no.7:312-316 J1 '61.

VERNESCU, Al., ing.; CHIRAN, P., ing.; CIRCOANA, A., ing.

Pilot experiment for secondary recovery by water injection in  
the 5-point panel at Drader 1 of Moreni-aud. Petrol si gaze  
15 no.11:596-599 N '64.

COUNTRY : Romania M  
CATEGORY : Cultivated Plants. Grains. Leguminous Grains.  
Tropical Cereals  
ADDITIONAL : Ref Zhur-Biologiya, No.4, 1959,  
No. 15596  
AUTHOR : Vernaseu, Calin  
TITLE : --

ABSTRACT : Effectiveness of Placing the Complex Chemical  
Fertilizer Nitrophoska under Wheat.

ORIG. PUB. : Rev. gospod. agric. stat, 1958, No.1, 40-3

ABSTRACT : No abstract

CARD:

1/1



VERNESCU, E. ; GRUNDL, Z.

Some problems regarding the designs of dwellings in Bucharest for the 1958 period. p. 575.

REVISTA CONSTRUCTIILOR SI A MATERIALELOR DE CONSTRUCTII. (Asociatia Stiintifica a Inginerilor si Technicienilor din Romania si Ministerul Constructiilor si al Marerualelor di Constructii) Bucuresti, Rumania. Vol. 10, no. 12, Dec. 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 6, June 1959

Uncl.

VERNESCU, P.

Construction of the building; framework of a repair shop. p. 587

INDUSTRIA CONSTRUCTILOR SI A MATERIALELOR DE CONSTRUCTIL, Bucuresti. Vol 6, No. 11,  
Nov., 1955

SO: East European Accessions List (EEAL) Library of Congress, Vol 5, No. 7, July, 1956

LUPESCU, A., ing.; VERNESCU, P., ing.

Standardization of constructions for industrial production. Rev  
constr si mat constr 16 no.9:470-478 S '64.

1. Director, Institute of Technical Construction Planning (for  
Lupescu). 2. Technical Director, Institute of Technical Construc-  
tion Planning (for Vernescu).

VERNESKU, Aleksandr (Rumynskaya Narodnaya Respublika).

Method of forecastin the behavior of formations in the process of  
operating with partial dislodgement of oil by water after a pressure  
Neft.khoz. 34 no.11:20-31 N '56. (MIRA 10:1)  
(Oil field flooding)

*Vernic, Elza.*

YUGOSLAVIA/General Section - Scientific Institutions.  
Conferences.

A-4

Abs Jour : Referat Zhur - Fizika, No 1, 1958, 54  
Author : Vernic Elza  
Inst : -  
Title : Tenth Plenum of the Council of Physical and Mathematical  
Society FNRJ, Held on 6 October 1956 in Ljubljana.  
Orig Pub : Glasnik mat. fiz. i astron., 1956, 11, No 3-4, 284  
Abstract : No abstract.

Card 1/1

VERNIC, E.; SMOLEC, I.

Report on the Plenum of the Association of the Societies of  
Mathematicians and Physicists, and a short survey of the  
proceedings at the Consultations and Seminar for Teachers  
and Professors of Bosnia and Hercegovina, October 29-30,  
1961. Glas mat fiz Hrv 17 no.1/2:136 '62 [publ. '63].

plane has at least three  
points as critical points. If  
the points are regular and

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859520003-8

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859520003-8"



*P.*

shown that the agent's primary activity was in the field of

*RADOVAN V. RYIC*  
In the case of the two-body problem the geometrical uni-  
formization is at the same time a kinematical uniformization  
(for example, for the elliptic case the geometrical uniformization  
is a uniformization in the sense of the theory of automorphisms of the

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859520003-8

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859520003-8"

**"APPROVED FOR RELEASE: 09/01/2001**

**CIA-RDP86-00513R001859520003-8**

**APPROVED FOR RELEASE: 09/01/2001**

**CIA-RDP86-00513R001859520003-8"**

VERNIC, Radovan

Diskussion der Sundmanschen Losung des Dreikörperproblems. Zagreb, Sudslavische Akademie der Wissenschaften und Künste, 1954. 145 p. (Discussion of Sundman's solution of the problem of three bodies. In German. bibl.)

SOURCE: East European Accessions List, (EEAL), Library of Congress, Vol. 4, No. 12, December 1955

VERNIC-R.

300

✓ 53-97 551 502,312  
 Vernic, Rudovan, Richardsonova numericka prognoza vremena. [Richardson's method of numerical weather forecasting.] *Yugoslavanska Hidrometeorološka Sadržaj, Hidrometeorološka Glasnik*, 1(2): 88-98, 1948. In Croatian. DWR Lewis F. Richardson's "Weather prediction by numerical process" (Cambridge, 1922) is reviewed and criticized. It is pointed out that the method, which consists in formulating equations for certain variables and then integrating these equations cannot take into account the actual correlation of a variable with the development of weather at a given time. It is further pointed out that by the introduction of restrictions and modifications for certain elements (some of which cannot even be numerically evaluated) the system becomes over-complicated. Several other objections are made from mathematical, physical and logical points of view, although the author states that Richardson's contribution is outstanding in the field. Subject Headings: 1. Numerical forecasting. 2. Richardson's numerical forecasting method. 1. Richardson, Lewis F. -G J

66 80

Var Nic: RADOVAN

Vernić, Radovan. Numerische Auflösung des allgemeinen  
Dreikörperproblems. Rad. Jugoslav. Akad. Znan.  
Fiz. Tehn. Nauke 302, 47-76

I-3/W

<u>Vernic, Radovan</u>	Numerische Analysis	Acad	Znan
<u>Brekkerperprobleem</u>	Rad	Jugoslav	302, 47-75
Umyet	Gabel Mat	Fiz	German sum
112/10551	(Serbo-croatian)	of the general	three body
	mathematical	problem	New York

12. Urocyon (Serotomation of the genital  
The numerical reduction of the genital  
problem consists in the reduction of the  
problem of reduction is a problem of reduction

problem consists in the differential equation  $\dot{x} = f(x, u)$  in which  $x$  is the state vector,  $u$  is the control vector, and  $f$  is a vector function. The control vector  $u$  is chosen so that the system reaches a desired state  $x_d$  in a minimum time. The control vector  $u$  is chosen so that the system reaches a desired state  $x_d$  in a minimum time. The control vector  $u$  is chosen so that the system reaches a desired state  $x_d$  in a minimum time.

EX-108-76

Prirud. Društvo. Glasnik Mat. 1954; MR 16, 529, 181, 9  
247-266 (1953); 9, 3-13 (1954); Diskussion der  
menschlichen Lösung der Dreikörperprobleme. Jugosl.  
Akad. Znan. Umjet., Zagreb, 1954; MR 16, 529, 181, 9

6671 the author has shown the existence and uniqueness of the general solution given by convergent power series in  $u$ , the latter being defined by the relation

$$dt = \frac{du}{V}, \text{ where } V = \sum_1^s \frac{m_i m_k}{r_{ik}} \quad (i \neq k)$$

is the potential of the system. The regularizing "pseudo-time"  $\tau$  is the global uniformizing parameter of the coordinates which are the functions of the time  $t$ :

The case of the general three-body problem with equal masses  $m_1 = m_2 = m_3 = 1$  was considered earlier by J. Zumkley (Astr. Nachr. 272, 66-76 (1941), MR 4, 259), using the method of numerical integration. The present author uses the same example to illustrate the numerical solution by power series. Explicit formulas for the first three successive approximations are given up to the eighth decimal place and the results are given in three tables. Comparison of the tables 2 and 3 shows that higher order approximations do not affect the values of the coefficients calculated, i.e. the approximation process is to be considered as convergent.

A numerical solution of the three-body problem is given for the case of equal masses  $m_1 = m_2 = m_3 = 1$  and initial conditions  $x_1 = y_1 = z_1 = 1$ ,  $\dot{x}_1 = \dot{y}_1 = \dot{z}_1 = 0$ . The results are given in three tables. Comparison of the tables 2 and 3 shows that higher order approximations do not affect the values of the coefficients calculated, i.e. the approximation process is to be considered as convergent.



VERNIC, R.

Y ugoslavia (430)

Science

Determination of the orbits of the binary stars.

p. 145. Glasnik Matematicko-Fizicki I Astronomski,  
Vol. 2, no. 4-5, 1947.

East European Accessions List, Library of Congress,  
Vol. 1, no. 14, Dec. 1952. UNCLASSIFIED.

VERNIC, Radovan

"Termodinamicke karakteristike zracnih masa. Zagreb, Jugoslavenska akademija znanosti i umjetnosti, 1952. (35 p.) (Jugoslavenska akademija znanosti i umjetnosti. Odjel za matematike, fizicke i tehnicke nauke. Rasprave, sv. 1., br. 3) (Thermodynamic characteristics of air masses. English summary. maps (fold. in pocket bibl., graphs, tables)

SO: East European Accessions List, Vol 3, No 8, Aug 1954

MINIC, RADOVAN.

Staze restringiranog problema triju tijela u inercijalnom sustavu. Zagreb, Jugoslavenska akademija znanosti i umjetnosti, 1952. 43 p. (Jugoslavenska akademija znanosti i umjetnosti. Odjel za matematičke, fizičke i tehničke nauke. Rasprave, sv., l., br. 4) (Traces of restricted three-body problems represented in an inertial system. German summary. bibl., graphs, tables)

so: East European Accessions List, Vol 3, No 8, Aug 1954

AMS/A+B		1950 E	
<p>6-37  Vernik, Markovan, L. <i>Local synoptic analysis &amp; thermodynamical characteristics of air masses</i>. [Local synoptic analysis and thermodynamical characteristics of air masses.] <i>Rad Geofizickog Zavoda u Zagrebu</i>, 2nd Ser., No. 2:19-22, 1948. 22 figs. 9 tables. 107 refs. 10 equations. Summary in English p. 81-85. MII-BH - A detailed description, accompanied by elaborate contingency tables and charts, of the methods used in synoptic analysis and forecasting, at the Geophysical Institute in Zagreb. As reports from other countries were limited during the war, air mass and weather data for Yugoslavia were analyzed in detail by the Bergeron method of synoptic climatology and an air mass calendar constructed so that the general synoptic situation could be deduced from the local weather situation (especially the conservative progression of air masses) and the local weather at other places than predicted by this same statistical method. Subject Headings: Synoptic climatology, Synoptic analysis. V.A.</p>			
<p>ASB-55A METEOROLOGICAL LITERATURE CLASSIFICATION</p>			

VERNIC, Radovan

Periodic and symmetrical solutions of the problem of three bodies.  
Rad mat fiz teh JAZU no.319:5-54 '61.

VERNIC, R.

"Impact conditions of a problem of three bodies." p. 3, (GLASNIK, MATEMATICKO-FIZICKI I ASTRONOMSKI, Vol. 9, No. 1, 1954, Zagreb, Yugoslavia)

SO: Monthly List of East European Accessions, (EEAL), IC, Vol. 4, No. 4, Apr 1955, Uncl.

VERNIC, Radovan

Critical consideration of the impact on the problem of several bodies.  
Rad mat fiz teh JAZU no.314:5-85 '57 (on cover 1959). (EEAI 9:9)  
(Dynamics) (Impact) (Differential equations)  
(Problem of three bodies)

VERNIC, Radovan

Solution of the problem of several bodies. Rad mat fiz teh JAZU  
no.314:111-186 '57.(on cover 1959). (EEAI 9:9)  
(Dynamics) (Differential equations)  
(Impact) (Problem of three bodies)





VERNICEANU, A.; COSCODAN, T.

"Economic studies and research." Vol.1. Reviewed by A. Verniceanu,  
T. Coscodan. Probleme econ 17 no.7:134-138 J1 '64.

VERNICEANU, A.; PREDOT, I.

Economic development of Bulgaria. Probleme econ 17 no.9:  
131-136 S '64.

ZAMFIR, C., dr. medic emerit; STRIMBEANU, I., dr.; TURCU, E., dr.;  
VERNICEANU, V., dr.

The comparative value of electrophoresis and punch biopsy in the  
diagnosis and evolution of post-viral chronic hepatitis. Med. intern.  
14 no.10:1183-1188 0 '62.

1. Lucrare efectata in Spitalul Militar Central, Sectia I boli  
interne, Bucuresti.

(HEPATITIS) (HEPATITIS, INFECTIOUS)  
(BLOOD PROTEIN ELECTROPHORESIS) (LIVER) (BIOPSY)

ZAMFIR, C., dr., doctor in stiinte medicale, medic onorit; VERNICEANU, V.

Considerations on the importance of the Pescador's 3P in the  
diagnosis of chronic coronary insufficiency. Med. Intern.  
(Bucur) 17 no.5:545-552 My '65.

1. Lucrare efectuata la Sectia I de boli interne, Spitalul  
militar central, Bucuresti.

RUMANIA

ZAMFIR, C., Major-General, Medical Corps, Dr. docent in Medical Sciences, Physician Emeritus (doctor docent in stiinta medicala, medic emerit); EFANOV, Al., Lieutenant-Colonel, Medical Corps; VERNICEANU, V., Major, Medical Corps; IONESCU, M., Colonel, Pharmacist; and IONASCU, Al., Lieutenant-Colonel, Medical Corps.

"Critical Study of Humoral Modifications of the Bouillaud-Sokolski Type of Rheumatism Under the Influence of Treatment"

Bucharest, Revista Sanitara Militara, Vol. 62, No. 3, May-June 1966; pp 403-411

Abstract: Study n 60 members of the armed forces, aged on the average 22 years; very comprehensive physical examination with electrocardiogram, chest fluoroscopy, and detailed laboratory studies including sedimentation rate, fibrinogen, mucopolysaccharide and c-reactive protein in serum and electrophoresis, antistreptolysin O. The erythrocyte sedimentation rate determination was one of the most important criteria, despite its simplicity, it was elevated in 100% of the cases. Data are tabulated and discussed in detail for each of the tests. 6 tables, 6 Western and 2 Soviet, 7 Rumanian references, manuscript received 21 February 1966.

RUMANIA

ZAMFIR, C., Major-General, Medical Corps, Dr. Docent in Medical Sciences, Physician Emeritus (Doctor docent in stiinte medicale, medic emerit); TURCU, E., Lieutenant-Colonel, Medical Corps; and VERNICEANU, V., Major, Medical Corps.

"Medical Sequelae of Cholecystectomy"

Bucharest, Revista Sanitara Militara, Vol. 62, No. 3, May-June 1966; pp 485-491

Abstract: Review of various types and times of onset and course of the postcholecystectomy syndrome, based primarily on analysis of the literature and clinical observations, ending with some rules on how to prevent it or injunctions to limit cholecystectomy to strict indications, handle tissues carefully, make sure that the return to function of the digestive system is slow and gradual. 1 French, 6 Rumanian reference. Manuscript received 6 December 1965.

1/1

- 28 -

VERNICHENKO, A.F.

"Characteristics of Intrabreed Types of Cows of the Black-Variegated (cherno-pestryy) Breed on the Basis of the Morphology and Functions of their Integument";  
dissertation for the degree of Candidate of Agricultural Sciences  
(awarded by the Timiryazev Agricultural Academy, 1962)

(Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, Moscow, No. 2, 1963, pp 232-236)



*Vernichenko, V.V.*  
VERNICHENKO, V.V.

~~Moraine deposits, glacial dislocations, and karst phenomena in the~~  
region of the city of Lvov. Nauk.zap. L'viv un. 39:140-141 '56.  
(MIRA 11:1)

(Lvov--Moraines) (Lvov--Karst)

VERNIDUB, A.S., Cand Chem Sci -- (diss) "Separation of  
vanadium from chromium by the ion exchange method of  
chromatography." Novocherkassk, 1958, 11 pp (Min of Higher  
Education USSR. Novocherkassk, <sup>+</sup>Order of Labor Red Banner  
Polytechnic Inst im S. Ordzhonikidze) 130 copies  
(KL, 27-58, 10h)

- 34 -

VERNIDUB, A.S. [Vernydub, A.S.], inzh.-mekhanik

How we mechanized the fueling of tractors with petroleum products.  
Mekh. sil'. hosp. 13 no.9:19-20 3 '62. (MIRA 17:3)

1. Zaveduyushchiy masterskoy gosudarstvennogo plemennogo ovtsezavoda  
"Illichovka", Barvenkovskiy rayon, Khar'kovskoy oblasti..



SOV/137-58-10-21786

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 189 (USSR)

AUTHORS: Vernidub, A. S., Petrashen', V. I.

TITLE: Determination of Vanadium In Steels With a High Chromium Content (Opredeleniye vanadiya v stalyakh s vysokim soderzhaniyem khroma)

PERIODICAL: Tr. Novocherk. politekn. in-ta, 1958, Vol 69/83, pp 149-152

ABSTRACT: 0.5 - 1 g of steel is dissolved by boiling in 40 cc of  $H_2SO_4$  (1:4), oxidized with  $HNO_3$  (1:1), and evaporated to  $SO_3$  fumes. The cooled solution is neutralized with  $NH_4OH$  (1:1) to the appearance of cloudiness, 1 - 1.5 cc  $H_2SO_4$  (1:4) and 20 - 25 cc of 4N KSCN solution are added. The solution is boiled 2 - 3 min, cooled, and passed through a column with the SBS cationite in the ammoniacal form at the rate of 2.5 - 3 cc/min.  $V^{4+}$  is completely absorbed by the SBS cationite. V is extracted from the column by 300 cc of  $H_2SO_4$  (1:8) passed through at the rate of 2.5 - 3 cc/min. The eluate (the acid solution containing V) is collected into a 500-cc flask and the V in it is determined by the volumetric or the potentiometric method. 0.02 - 0.24% V is determined with a relative error of  $\pm 3-5\%$ . P. K.

Card 1/1

1. Vanadium--Determination 2. Chromium steel--Analysis

VERNIDUB, I.I.; ZHIKHAREV, A.S.; MEDALIYEV, Kh.Kh.; PRAVDUN, N.S.;  
SULAKVELIDZE, G.K.; CHUMAKOVA, G.G.

Study of the ice-forming ability of aerosols of lead iodide.  
Izv. AN SSSR. Ser. geofiz. no.9:1286-1293 S '62. (MIRA 15:8)

1. Vysokogornyy geofizicheskiy institut AN SSSR.  
(Weather control) (Lead iodide)

AKSENOV, M. Ya.; VERNIDUB, I. I.; KARTSIVADZE, A. I.; OKUDZHAVA, A. M.;  
PLAUDE, N. O.; SHISHINTSEV, V. V.

Study of the ice-forming activity of silver iodide aerosol  
generated in the burning process of pyrotechnical compositions.  
Trudy Inst. geofiz. AN Gruz. SSR 20:197-204 '62.  
(MIRA 16:1)

(Silver iodide) (Atmospheric nucleation)

L 96729-66 EET(1)/FCC GW  
ACC NR: AR5015458

UR/0163/65/000/006/B062/B062  
551.503.6

33  
B

SOURCE: Ref. zh. Geofizika, Abs. 6B383

AUTHOR: Vernidub, I.I.; Kartsivadze, A.I.; Kiziriya, B.I.; Labutin, R.A.

TITLE: A method for the introduction of reagents into clouds with the use of aviation  
12, 4155

CITED SOURCE: Tr. Vses. soveshchaniya po aktivn. vozdeystviyam na grad. protsessy.  
Tbilisi, 1964, 182-192

TOPIC TAGS: atmospheric cloud, cloud seeding, climate control, pyrotechnics

TRANSLATION: A method is proposed for the introduction of iceforming aerosol substances into overcooled clouds, by firing into them from an airplane using an automatic multibarrel mount firing special anti-hail cartridges. The cartridges pyrotechnic charge ignites at a proper point in the trajectory and causes a trace of active smoke to form. The firing device is a 24-barrel block, consisting of six 4-barrel units. The anti-hail cartridge is described, and a formula given for an effective pyrotechnic compound to be used in it. The above method of introducing reagents was used to affect the heavy cumulous clouds in the Alazanskaya valley, during the period 1958 to 1962. The tests gave positive results. Similar methods may be used for the introduc-

Card 1/2



L 16729-66

ACC NR: AR5016458

0

tion of other reagents, e.g., solid carbon dioxide and reagents in pulverized form.  
In this case, the dispersion of the reagent is initiated by explosion. L. Krasnovskaya.

SUB CODE: 04 /

~~ENCL-00~~

SUBM DATE: none

Card 2/2 *not*

38984  
S/137/62/000/006/132/163  
A052/A101

11.222/  
AUTHORS: Korneyev, V. L., Vernidub, I. I.

TITLE: High-temperature oxidation of dispersion aluminum

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 84, abstract 61523  
(V sb. "Issled. po zharoprochn. splavam". T.7, Moscow, AN SSSR, 1961, 309 - 316)

TEXT: The process of high-temperature oxidation of Al powders is accompanied by the melting of the metal, its evaporation and a subsequent reaction of the mixture of Al vapors with  $O_2$  in the gaseous phase. In case of an insufficient heat supply to the molten Al drop, the process of chemical reaction acquires a pulsating character and represents a series of successive flashes of Al vapor breaking through periodically into the reactor space through the breaks in the oxide film covering the drop. In case of a sufficient heat supply to molten Al (as in case of the preheating of reagents) after the first breaking of the oxide film by metal vapor pressure, the surface of the molten Al drop is laid bare, which secures a continuous Al evaporation and a free escape of vapors into the

Card 1/2

High-temperature oxidation of dispersion aluminum

S/137/62/000/006/132/163  
A052/A101

reactor space. At a short distance from the molten metal surface Al vapors enter into chemical reaction with  $O_2$  and in this case the process takes a continuous course. The completeness of the reaction of Al powders with  $O_2$  makes up 37 - 56% and increases to 81 - 99% in case of a preheating of metal powder and  $O_2$  to  $400^\circ C$ .

Authors' summary

[Abstracter's note: Complete translation]

Card 2/2

VERNEDUB, L. I.

"Explanation of the Conditions of the Formation of Ramose Ears of Hybrid Wheat Types."  
Cand Agr Sci, All-Union Order of Labor Red Banner Selection and Genetics Inst imeni  
T. D. Lysenko, Odessa, 1955. (KL, No 14, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended  
at USSR Higher Educational Institutions (16).

**VERNIDUB, F.I., kandidat tekhnicheskikh nauk.**

**Investigation of thin layer heat exchange apparatus of the recuperating type with forced turbulent flow of an elastic fluid. Trudy RIIZHT no.17:16-36 '53. (MLRA 9:6)  
(Heat exchangers)**

VERNIDUB, F.I., kand.tekhn.nauk

Operation of boiler rooms converted to gas fuel. Razop.  
truda v prom. 4 no.8:11-12 Ag '60. (MIRA 13:8)

1. Rostovskiy institut inzhenerov zheleznodorozhnogo  
transporta.  
(Boilers--Firing--Safety measures)

VERNIDUB, F.I., kand.tekhn.nauk, dots.

Methods of burning Stavropol natural gas in industrial boiler furnaces.  
Trudy RIIZHT no.26:115-123 '58. (MIRA 12:3)  
(Gas, Natural) (Furnaces)

GERTSYK, I.R., kand.tekhn.nauk, dots.; VERNIDUB, F.I., kand.tekhn.nauk, dots.

Investigating the performance of transportable watertube boilers having  
furnaces equipped with mechanical stokers. Trudy RIIZHT no.26:124-137  
'58. (MIRA 12:3)

(Boilers, Watertube) (Furnaces)



GERTSYK, I.R., dotsent; ~~VERNIKUR~~ ~~E.Lvy~~ dotsent; VARTBARONOV, O.R., dotsent.

Batching precipitating agents in treating water inside low-pressure  
vertical-cylindrical boilers. Trudy RIIZHT no.19:51-59 '55.  
(Locomotive boilers) (MIRA 9:7)

GERTSYK, I.R., dotsent, kandidat tekhnicheskikh nauk; ~~VERNIINUB, F.I.,~~  
dotsent, kandidat tekhnicheskikh nauk.

Results of the heat engineering tests of the vertical cylindrical  
Shukhov-Saraf type S-3 boiler. Trudy RIIZHT no.18:159-173 '54.  
(MLBA 9:3)

(Boilers)

S/137/60/000/011/003/043  
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No.11, p.24, # 25330

AUTHORS: Vernidub, A.S., Petrashen', V.I.

TITLE: On Sorption of Chromium and Vanadium by the SBS Cationite

PERIODICAL: Tr. Novocherk. politekhn. in-ta, 1959, Vol. 97, pp. 163 - 175

TEXT: An investigation was made for the purpose of studying the possibility of separating Cr and V on a SBS cation and sulfocarbon. It is shown that best results are obtained when using SBS. Reduction of the SBS chromate takes place at a pH solution up to 5.2; at an increase of pH to 6, reduction is interrupted. Trivalent Cr (obtained during reduction or taken from the initial solution) is most completely sorbed at pH 5 - 5.2; its sorption is reduced at a lower pH. Highest sorption takes place at pH 0.9; it decreases at a pH value increased to 4. If pH is  $> 5$ , V is not sorbed. The quantitative separation of Cr and V based on the difference of oxidizing-reduction potentials and ion charges, is not possible.  
L.P.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

*V. Vernidub, A. S.*  
 USSR Physical Chemistry. Surface Phenomena. Adsorption.  
 Chromatography. Ion Exchange.

B-13

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22563.

Author : A. S. Vernidub, V. I. Petrashen'.

Inst : Not given

Title : About the behavior of hexavalent and trivalent chromium on  
 cationite sorbents.

Orig Pub : Tr. Novocherkas. Polytekhn. in-ta. 1956, 41(55), 15-21.

Abstract : Chromium absorption is studied by filtration of  $K_2Cr_2O_7$   
 through the cationite SBS layer or through sulfocarbon in  $H^+$   
 or  $Na^+$  forms at various acidity of solutions. By a feeble-  
 acid reaction ( $pH \leq 6.3$ )  $Cr(6+)$  is reduced, and the pro-  
 duced  $Cr(3+)$  is absorbed by cationite.  $K_2Cr_2O_7$  concentra-  
 tion increases slowly in the filtrate coming out of the  
 column but does not attain its initial value at the entrance.  
 The fullest saturation of cationite SBS by Chromium occurs at  
 $pH = 5-5.3$ ; at higher acidities a marked desorption of  $Cr^{3+}$   
 is observed. Adsorption of  $Cr^{3+}$  from solutions  $Cr_2(SO_4)_3$   
 acidified by  $H_2SO_4$  is observed only at acid concentration  $\leq$   
 0.1 n. Cationite SBS in limits of acid concentration 0.01-0.1

Card 1/2

-200-

USSR/Physical Chemistry. Surface Phenomena. Adsorption.  
Chromatography. Ion Exchange.

B-13

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22563:

n. sorbs on 0.4-0.5 mg/ekv  $\text{Cr}^{3+}$  one g more than sulfocarbon.  
Cr adsorption on ationites in  $\text{Na}^+$  form is higher than in  
 $\text{H}^+$ -form.

Card 2/2

-201-

VERNIDUB, F.I.

VERNIDUB, F.I.; TIKHONOVSKIY, P.A.

Burning natural gas from the Stavropol' field in furnaces of industrial boilers. Gaz.prom. no.12:16-19 D '57. (MIRA 11:1)  
(Gas, Natural) (Boilers)

VERNIDUB, I. I.

ANDREYEV, Konstantin Konstantinovich, professor; VERNIDUB, I. I., redaktor  
FRIDKIN, A. M., tekhnicheskiiy redaktor

[Thermal disintegration and combustion of explosives]  
Termicheskoe razlozhenie i gorenie varyvchatykh veshchestv.  
Moskva, Gos. energ. izd-vo 1957. 311 p. (MLRA 10:5)  
(Explosives)

MAKOKLIN, I.A.; VERNIDUB, I.I.; ZHVANKO, Yu.N.; KARPOV, V.T.;  
RAZUMOVSKAYA, G.S.; VOL'KHOVSKAYA, A.A.

Kinetics of the oxidation of fine magnesium powders at high  
temperatures. Zhur.prikl.khim. 33 no.4:824-831 Ap '60.  
(MIRA 13:9)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut  
narodnogo khozyaystva imeni G.V.Plekhanova.  
(Magnesium) (Powder metallurgy) (Oxidation)



SHADLOVSKIY, Aleksandr Aleksandrovich. Prinimali uchastie:  
VERNIDUB, I.I., kand. tekhn. nauk; SHAKHIDZHANOV, Ye.S.,  
kand. tekhn. nauk; SVETANA A.V., inzh.; IVANOVA, N.N.,  
kand. tekhn. nauk, retsenzent; BIL'DYUKEVICH, N.A., kand.  
tekhn. nauk, retsenzent; SUVCROVA, I.A., red.

[Principles of pyrotechnics] Osnovy pirotekhniki. Izd.3.,  
perer. i dop. Moskva, Mashinostroenie, 1964. 338 p.  
(MIRA 17:12)

TOPIC TAGS: aluminum powder, aluminum powder oxidation, high temperature oxidation

ABSTRACT: Considerable attention is currently being paid to high-temperature metal oxidation. The present article is a continuation of investigations (see V. G. Korneyev and I. G. Yemel'ukh Vyssokotemperaturnoye okisleniye dispersnogo aluminizma. Sb. Nauch. Razv. i. Tekhn. Pross. (Sci. Adv. and Tech. Pross.), vol. 7, Izd-vo AN SSSR, Moscow, 1978, p. 115) devoted to the study of the oxidation of aluminum powder. The results of the investigation of the oxidation of aluminum powder in air at temperatures of 1000-1200°C are presented. It is shown that the oxidation of aluminum powder is characterized by a high rate of oxidation and the formation of a protective oxide layer. The results of the investigation of the oxidation of aluminum powder in air at temperatures of 1000-1200°C are presented. It is shown that the oxidation of aluminum powder is characterized by a high rate of oxidation and the formation of a protective oxide layer.



1. The first of these is the

2. The second is the

3. The third is the